Inspection Report For Well: UT20736 - 04524

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466
This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah — Date: 12/10/2013
Others: Ajayi, Christopher — Time: 2:30 am / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stenner

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 30-10		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 12/31/2002		
Oil Field:	Antelope Creek (Duchesne)		
Location:	NWSE S30 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/29/2012	***Allowable Inj Pressure:***	1310 /
Last MIT:	Pass 12/13/2011	***Annulus Pressure From Last MIT:***	1685

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: (Select One)
- ☐ Construction / Workover
- ☐ Plugging
- ☐ Post-Closure
- ☐ Response to Complaint
- ☒ Routine
- ☐ Witness MIT
- ☐ Other

ICIS Entered
Date 12/3/13
Initials DS

OBSERVED VALUES:

Tubing Gauge:	☒ Yes ☐ No	Pressure: U: 111 / L: ____ psig	Gauge Range: Scada psig	Gauge Owner:	☐ EPA ☒ Operator
Annulus Gauge:	☒ Yes ☐ No	Pressure: 0 psig	Gauge Range: opened psig	Gauge Owner:	☒ EPA ☐ Operator
Bradenhead Gauge:	☐ Yes ☐ No	Pressure: ____ psig	Gauge Range: ____ psig	Gauge Owner:	☐ EPA ☐ Operator
Pump Gauge:	☐ Yes ☐ No	Pressure: ____ psig	Gauge Range: ____ psig	Gauge Owner:	☐ EPA ☐ Operator

Operating Status: (Select One)
- ☒ Active
- ☐ Being Reworked
- ☐ Not Injecting
- ☐ Production
- ☐ Plugged and Abandoned
- ☐ Under Construction

U2 Entered
Date 12/17/13
Initial AR

See page 2 for photos, comments, and site conditions.

GREEN	BLUE	CB
	1	

Inspection Report For Well: UT20736 - 04524 (PAGE 2)

PHOTOGRAPHS: ☐ Yes ☒ No List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s): _____

☐ Data Entry ☐ Compliance Staff ☐ Hard Copy Filing

NOTICE OF INSPECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/16/13
Hour: 8:00a

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts
Inspector's Name & Title (Print)

Inspector's Signature

EPA R8 3560-1 (8-89)

Original - Regional Office Copy
Yellow Copy - Operator Copy

OMB No. 2040-0042 Approval Expires 11/30/2014

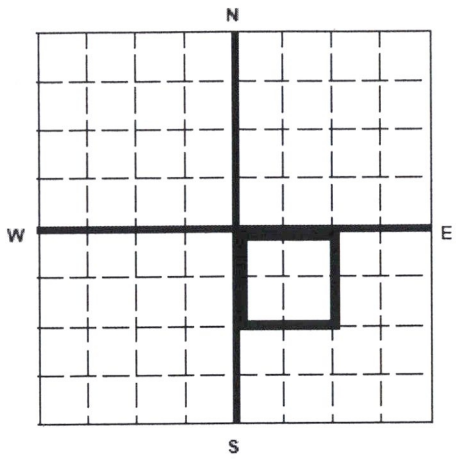
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04524

Surface Location Description
___ 1/4 of ___ 1/4 of NW 1/4 of SE 1/4 of Section 30 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 1980 ft. frm (N/S) S Line of quarter section
and 2199 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
[ ] Brine Disposal	[ ] Individual
[X] Enhanced Recovery	[X] Area
[ ] Hydrocarbon Storage	Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 30-10

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1118	1169	1073		0	0
February	16	1118	1123	1000		0	0
March	16	1132	1133	1066		0	0
April	16	1122	1135	971		0	0
May	16	1032	1138	997		0	0
June	16	1078	1175	863		0	0
July	16	1102	1149	1054		0	0
August	16	1159	1170	1163		0	0
September	16	1099	1133	833		0	0
October	16	1059	1059	902		0	0
November	16	1101	1155	971		0	0
December	16	1037	1042	773		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		03/21/2017

GREEN BLUE CBI

EPA Form 7520-11 (Rev. 12-11)

U2 Entered
Date 4/7/17
Initial

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Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 30-10 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2017**		
Sample ID:	**WA-345346**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	**1/25/2017**
System Temperature 1 (°F):	**300**
System Pressure 1 (psig):	**2000**
System Temperature 2 (°F):	**130**
System Pressure 2 (psig):	**50**
Calculated Density (g/ml):	**1.0044**
pH:	**8.70**
Calculated TDS (mg/L):	**10347.07**
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	**0.00**
H_2S in Gas (%):	
H2S in Water (mg/L):	**15.00**
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	**0.00**
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	**3517.84**	Chloride (Cl):	**4000.00**
Potassium (K):	**27.92**	Sulfate (SO_4):	**10.00**
Magnesium (Mg):	**9.78**	Bicarbonate (HCO_3):	**2684.00**
Calcium (Ca):	**22.25**	Carbonate (CO_3):	
Strontium (Sr):	**5.23**	Hydroxide(HO):	
Barium (Ba):	**12.95**	Acetic Acid (CH_3COO)	
Iron (Fe):	**24.07**	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	**6.39**	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	**0.09**	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	**0.24**	Bromine (Br):	
Aluminum (Al):	**0.22**	Silica (SiO_2):	**26.31**
Lithium (Li):	**3.09**	Calcium Carbonate ($CaCO_3$):	
Boron (B):	**5.55**	Phosphates (PO_4):	**14.25**
Silicon (Si):	**12.30**	Oxygen (O_2):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	1.66	18.95	0.41	3.02	4.83	13.27	3.82	17.50	0.00	0.00	0.00	0.00	0.00	0.00	11.75	3.34
149.00	267.00	1.71	19.01	0.31	2.43	4.76	13.27	3.91	17.50	0.00	0.00	0.00	0.00	0.00	0.00	11.48	3.34
168.00	483.00	1.77	19.07	0.23	1.91	4.72	13.27	4.00	17.50	0.00	0.00	0.00	0.00	0.00	0.00	11.25	3.34
187.00	700.00	1.85	19.14	0.18	1.49	4.71	13.27	4.08	17.50	0.00	0.00	0.00	0.00	0.00	0.00	11.04	3.34
206.00	917.00	1.93	19.20	0.14	1.17	4.72	13.27	4.16	17.50	0.00	0.00	0.00	0.00	0.00	0.00	10.86	3.34
224.00	1133.00	2.02	19.25	0.11	0.95	4.74	13.27	4.23	17.50	0.00	0.00	0.00	0.00	0.00	0.00	10.70	3.34
243.00	1350.00	2.11	19.30	0.09	0.82	4.78	13.27	4.30	17.50	0.00	0.00	0.00	0.00	0.00	0.00	10.57	3.34
262.00	1567.00	2.22	19.33	0.09	0.77	4.84	13.27	4.36	17.50	0.00	0.00	0.00	0.00	0.00	0.00	10.45	3.34
281.00	1783.00	2.32	19.37	0.09	0.81	4.90	13.27	4.42	17.50	0.00	0.00	0.00	0.00	0.00	0.00	10.34	3.34
300.00	2000.00	2.43	19.39	0.10	0.90	4.98	13.27	4.46	17.50	0.00	0.00	0.00	0.00	0.00	0.00	10.25	3.34

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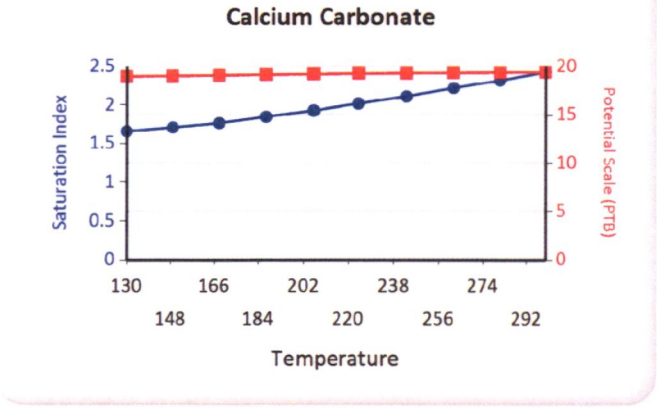
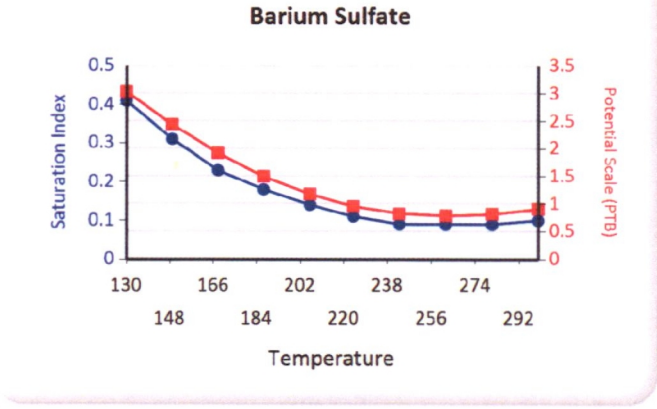
Water Analysis Report

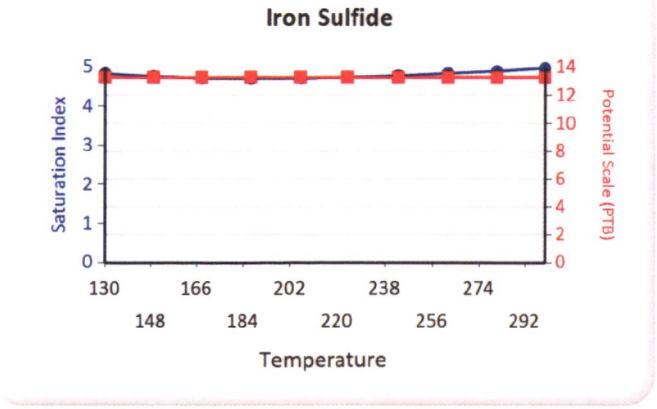
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
130.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85	4.29	11.61	0.04	4.78	18.60	2.70	23.97	13.98	18.72
149.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	3.05	4.29	11.16	0.04	5.48	19.00	3.07	25.77	14.39	18.72
168.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23	4.29	10.77	0.04	6.19	19.24	3.46	27.36	14.84	18.72
187.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	3.39	4.29	10.42	0.04	6.89	19.37	3.84	28.61	15.29	18.72
206.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	3.54	4.29	10.11	0.04	7.58	19.44	4.22	29.51	15.75	18.72
224.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	3.67	4.30	9.83	0.04	8.25	19.48	4.60	30.07	16.22	18.72
243.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	3.79	4.30	9.58	0.04	8.90	19.51	4.98	30.35	16.68	18.72
262.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	3.89	4.30	9.35	0.04	9.53	19.52	5.34	30.47	17.13	18.72
281.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	3.97	4.30	9.15	0.04	10.13	19.53	5.69	30.51	17.57	18.72
300.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	4.04	4.30	8.97	0.04	10.71	19.53	6.03	30.53	18.00	18.72

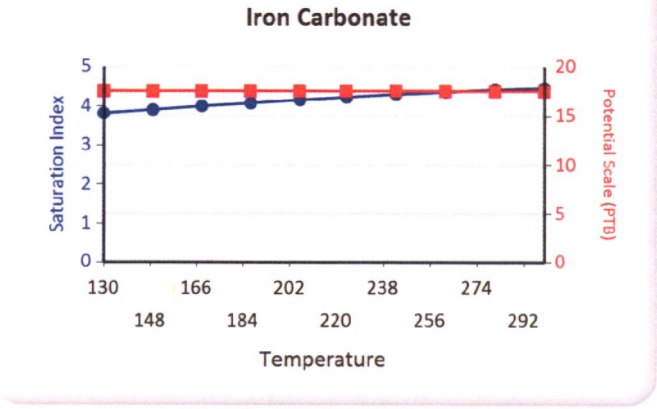
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate









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Vernal, UT 84078

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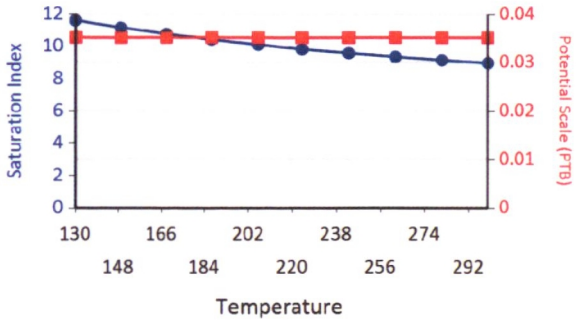
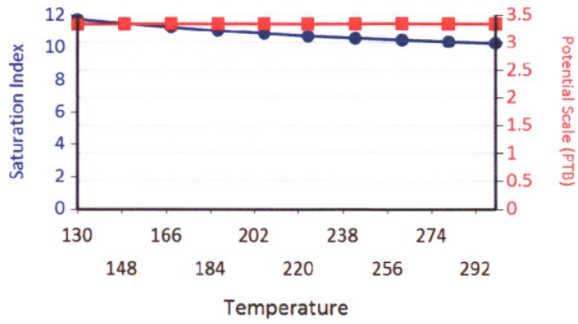
Water Analysis Report

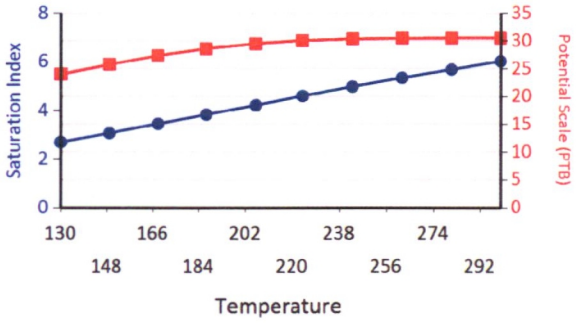
Lead Sulfide



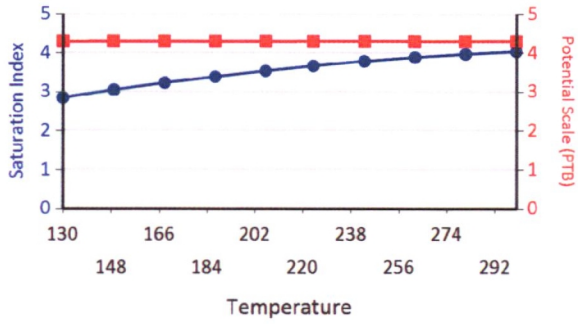
Zinc Sulfide



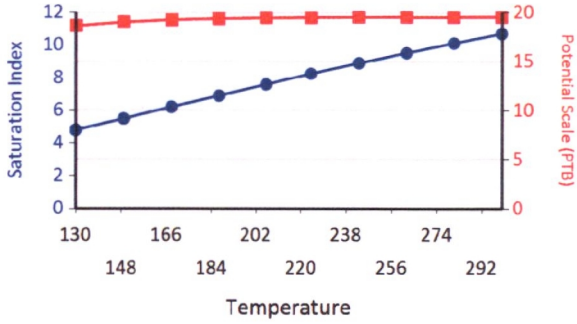
Ca Mg Silicate



Zinc Carbonate



Mg Silicate



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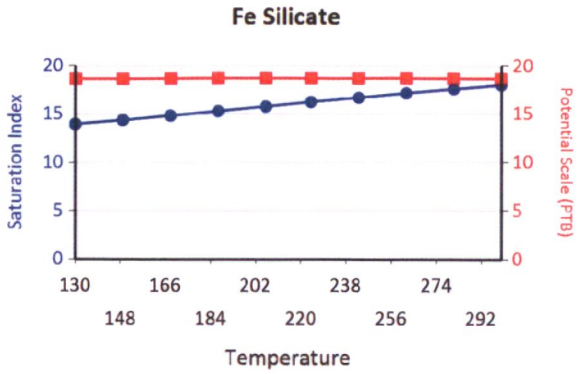


December 14, 2016

Gary Wang or Don Breffle
Underground Injection Control Enforcement
U.S. Environmental Protection Agency
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: 5-year Mechanical Integrity Tests
Ute Tribal 09-15, 21-07, 29-01, 30-10

Mr. Wang/ Mr. Breffle:

Please find enclosed 5-year Mechanical Integrity Tests for the following wells:

- Ute Tribal 09-15 UT20736-06698
- Ute Tribal 21-07 UT20736-07116
- Ute Tribal 29-01 UT20736-04619
- Ute Tribal 30-10 UT20736-04521

If any questions, please reach me at (208) 685-9711.

Best Regards,

Nicole Colby
Manager, Land & Regulatory Compliance

U2 Entered
Date 12/21/16
Initial DJ

TAB	GREEN	BLUE	CBI
		2	

Mechanical Integrity Test
Tubing/Casing Annulus Pressure Test

U.S. Environmental Protection Agency
Underground Injection Control Program
1595 Wynkoop Street, Denver, CO 80202

EPA Witness: ____________ Date: 12 / 12 / 16
Test conducted by: CHAD STEVENSON
Others present: ____________

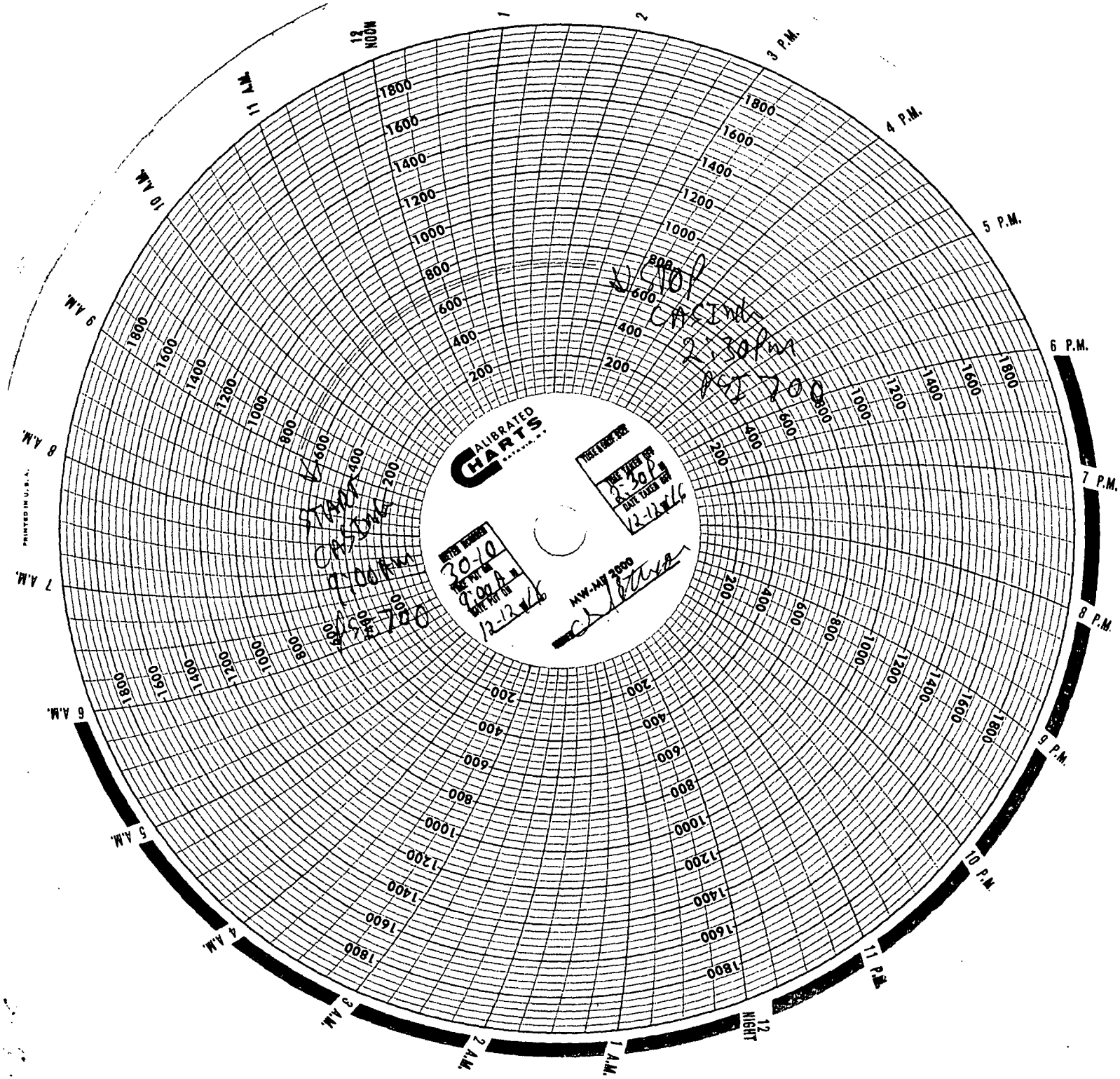
Well Name: 30-10	Type: ER SWD	Status: AC TA UC
Field: ANTELOPE CREEK		
Location: 30-10 Sec: ___ T ___ N / S R ___ E / W County: ________		State: UT
Operator: PETROGLYPH ENERGY		
Last MIT: __ / __ / __	Maximum Allowable Pressure: ________ PSIG	

Regularly scheduled test? [X] Yes [ ] No
Initial test for permit? [ ] Yes [ ] No
Test after well rework? [ ] Yes [ ] No

Well injecting during test? If Yes, rate: 25 bpd
Pre-test annulus pressure: ____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING		**PRESSURE RECORD**	
Initial Pressure	1036 psig	psig	psig
End of test pressure	1036 psig	psig	psig
CASING / TUBING ANNULUS		**PRESSURE RECORD**	
0 minutes	700 psig	psig	psig
5 minutes	700 psig	psig	psig
10 minutes	700 psig	psig	psig
15 minutes	700 psig	psig	psig
20 minutes	700 psig	psig	psig
25 minutes	700 psig	psig	psig
30 minutes	700 psig	psig	psig
5 1/2 HOURS ~~minutes~~	700 psig	psig	psig
____ *minutes*	psig	psig	psig
RESULT	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? If Yes, ________ psig.


CALIBRATED CHARTS
MW-MF 3000
12 NOON
1 P.M.
2 P.M.
3 P.M.
4 P.M.
5 P.M.
6 P.M.
7 P.M.
8 P.M.
9 P.M.
10 P.M.
11 P.M.
12 NIGHT
1 A.M.
2 A.M.
3 A.M.
4 A.M.
5 A.M.
6 A.M.
7 A.M.
8 A.M.
9 A.M.
10 A.M.
11 A.M.
PRINTED IN U.S.A.

OMB No. 2040-0042 Approval Expires 11/30/2014

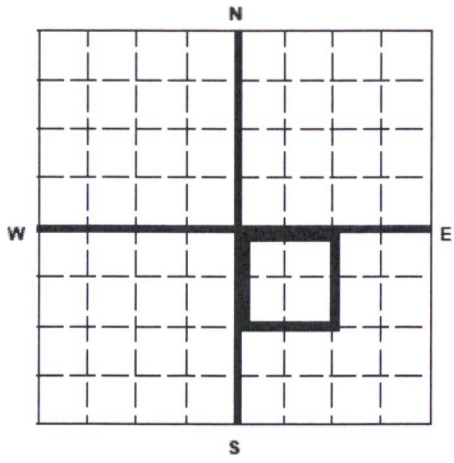
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State: Utah
County: Duchesne
Permit Number: UT2736-~~04434~~ 04524

Surface Location Description
__ 1/4 of __ 1/4 of NW 1/4 of SE 1/4 of Section 30 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 1980 ft. frm (N/S) S Line of quarter section
and 2199 ft. from (E/W) E Line of quarter section. U2 Entered

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Date 3/3/16
Initial DB

Lease Name: Ute Indian Tribe
Well Number: UTE TRIBAL 30-10

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1086	1123	1146		0	0
February	15	1111	1134	1044		0	0
March	15	1144	1159	1324		0	0
April	15	1108	1138	1029		0	0
May	15	1111	1140	1165		0	0
June	15	1108	1151	1047		0	0
July	15	1153	1166	1163		0	0
August	15	1074	1109	817		0	0
September	15	1094	1150	1015		0	0
October	15	1137	1169	1168		0	0
November	15	1148	1187	1238		0	0
December	15	1141	1196	1256		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*: Chad Stevenson, Water Facilities Supervisor
Signature:
Date Signed: 02/08/2016

EPA Form 7520-11 (Rev. 12-11)

GREEN BLUE CBI
TAB 2

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 30-10 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327690**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/13/2016
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0058
pH:	8.30
Calculated TDS (mg/L):	12351.33
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4319.50	Chloride (Cl):	5500.00
Potassium (K):	32.10	Sulfate (SO_4):	50.00
Magnesium (Mg):	23.73	Bicarbonate (HCO_3):	2318.00
Calcium (Ca):	57.13	Carbonate (CO_3):	
Strontium (Sr):	6.00	Acetic Acid (CH_3COO)	
Barium (Ba):	10.68	Propionic Acid (C_2H_5COO)	
Iron (Fe):	7.88	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.44	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.27	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.03	Silica (SiO_2):	23.57
Aluminum (Al):	0.03	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.76	Phosphates (PO_4):	9.45
Boron (B):	4.77	Oxygen (O_2):	
Silicon (Si):	11.02		

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	1.86	48.29	0.75	5.08	0.00	0.00	3.19	5.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	1.76	47.69	0.78	5.15	0.00	0.00	3.08	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	1.69	47.16	0.81	5.24	0.00	0.00	2.99	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	1.62	46.57	0.86	5.35	0.00	0.00	2.89	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	1.56	45.91	0.91	5.47	0.00	0.00	2.80	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	1.50	45.19	0.98	5.60	0.00	0.00	2.70	5.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	1.44	44.42	1.06	5.73	0.00	0.00	2.61	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	1.39	43.63	1.16	5.85	0.00	0.00	2.51	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	1.35	42.83	1.27	5.97	0.00	0.00	2.42	5.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	1.31	42.05	1.40	6.07	0.00	0.00	2.33	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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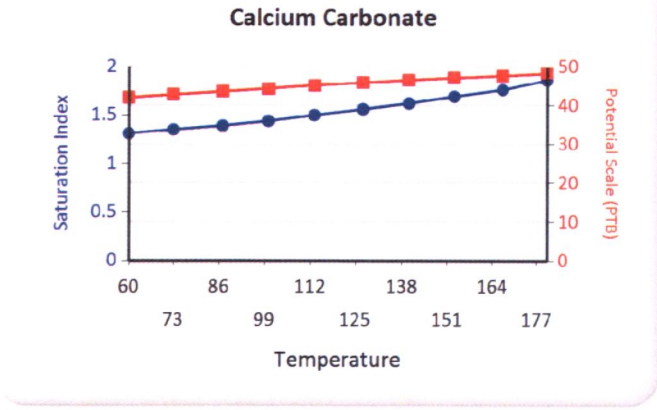
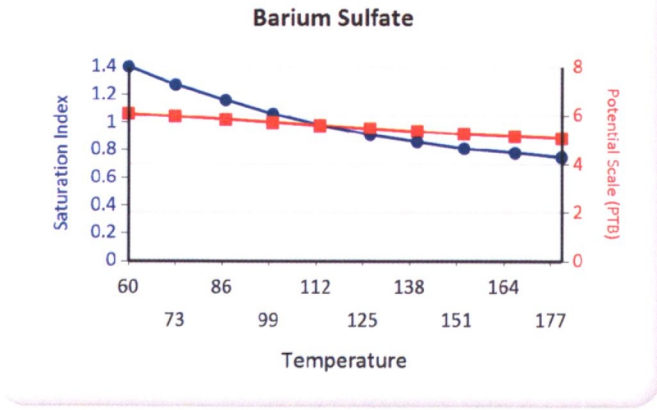
Water Analysis Report

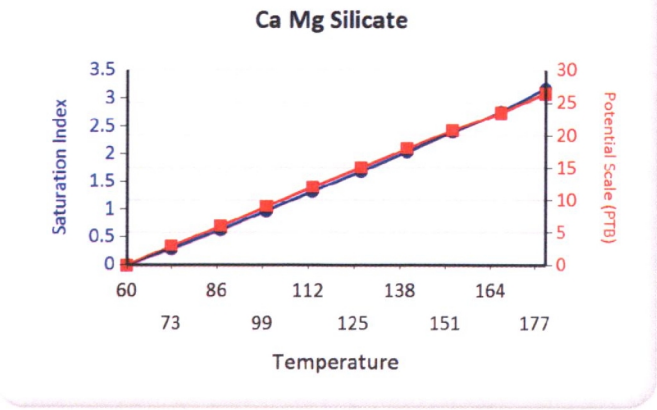
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.51	1.64	0.00	0.00	5.78	40.06	3.17	26.44	11.66	6.13
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.35	1.63	0.00	0.00	5.06	35.84	2.75	23.41	11.12	6.13
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.20	1.63	0.00	0.00	4.44	32.11	2.39	20.78	10.67	6.13
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	1.63	0.00	0.00	3.82	28.01	2.03	17.95	10.24	6.13
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	1.86	1.62	0.00	0.00	3.19	23.70	1.68	15.02	9.81	6.12
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	1.61	0.00	0.00	2.56	19.27	1.32	12.04	9.39	6.12
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	1.58	0.00	0.00	1.93	14.78	0.97	9.03	8.99	6.12
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	1.55	0.00	0.00	1.30	10.19	0.62	6.00	8.58	6.12
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	1.50	0.00	0.00	0.66	5.44	0.28	2.90	8.19	6.11
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	1.40	0.00	0.00	0.01	0.42	0.00	0.00	7.80	6.10

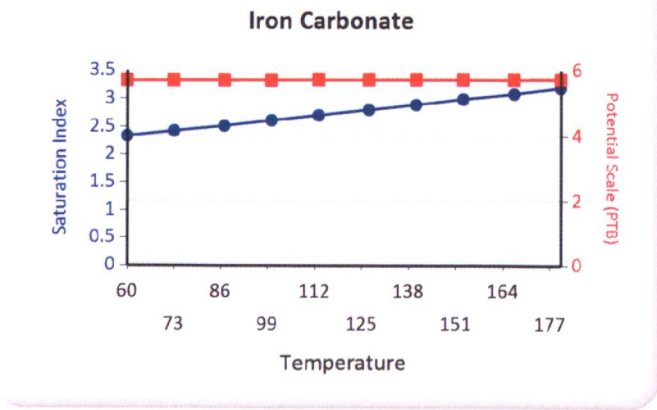
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Fe Silicate









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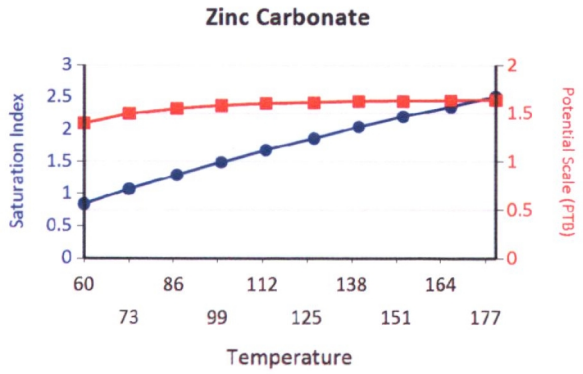
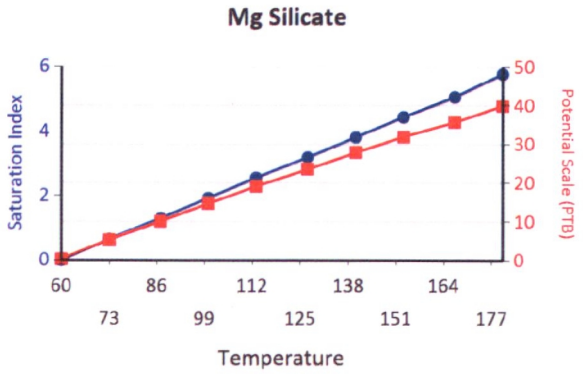
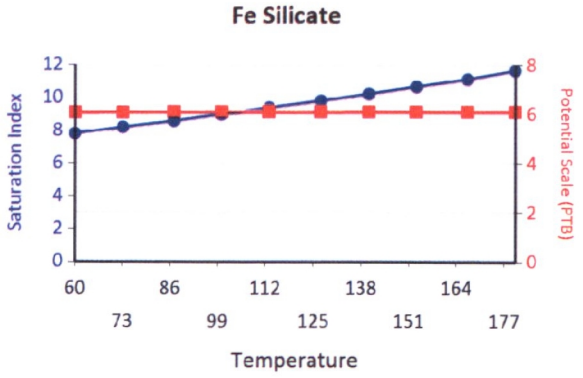
Water Analysis Report







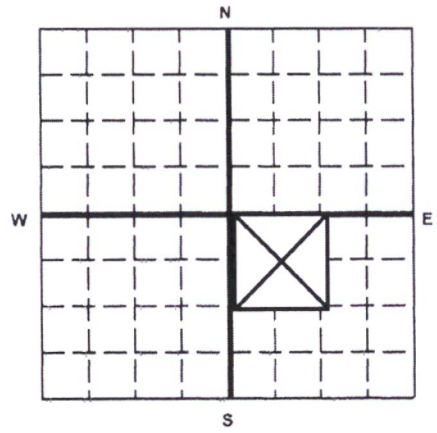
OMB No. 2040-0042 Approval Expires 12/31/2011

United States Environmental Protection Agency
Washington, DC 20460

EPA ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709	Ute Indian Tribe P.O. Box 70 Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04524

Surface Location Description

___ 1/4 of ___ 1/4 of NW 1/4 of SE 1/4 of Section 30 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 1980 ft. frm (N/S) S Line of quarter section and 2199 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
☐ Brine Disposal	☐ Individual
☒ Enhanced Recovery	☒ Area
☐ Hydrocarbon Storage	Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 30-10

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1151	1158	1881		0	0
February	14	1128	1140	1474		0	0
March	14	1159	1200	1983		0	0
April	14	1154	1181	1719		0	0
May	14	1155	1167	1778		0	0
June	14	1128	1160	1363		0	0
July	14	1142	1156	1660		0	0
August	14	1139	1145	1726		0	0
September	14	1087	1138	942		0	0
October	14	1114	1157	1464		0	0
November	14	1129	1131	1361		0	0
December	14	1116	1176	1350		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered
Date 3/31/15
Initial GW

TAB	GREEN	BLUE	CBI
		2	

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 30-10 INJ, DUCHESNE**	Lab Tech:	**Gary Winegar**
Sample Point:	**WELL**		
Sample Date:	**1/7/2015**		
Sample ID:	**WA-297458**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/14/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.0056
pH:	8.50
Calculated TDS (mg/L):	12934.36
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	20.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3230.31	Chloride (Cl):	6000.00
Potassium (K):	51.39	Sulfate (SO_4):	137.00
Magnesium (Mg):	20.21	Bicarbonate (HCO_3):	3416.00
Calcium (Ca):	37.94	Carbonate (CO_3):	
Strontium (Sr):	5.54	Acetic Acid (CH_3COO)	
Barium (Ba):	6.00	Propionic Acid (C_2H_5COO)	
Iron (Fe):	1.90	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.05	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.03	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.11	Silica (SiO_2):	25.88

Notes:
B=6.93 Al=.09 Li=1.6

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	1.79	32.44	1.50	3.46	4.02	1.05	2.46	1.38	0.00	0.00	0.00	0.00	0.00	0.00	12.01	1.07
88.00	157.00	1.80	32.44	1.41	3.43	3.94	1.05	2.49	1.38	0.00	0.00	0.00	0.00	0.00	0.00	11.83	1.07
97.00	300.00	1.81	32.46	1.34	3.40	3.87	1.05	2.54	1.38	0.00	0.00	0.00	0.00	0.00	0.00	11.66	1.07
106.00	443.00	1.82	32.49	1.27	3.38	3.82	1.05	2.58	1.38	0.00	0.00	0.00	0.00	0.00	0.00	11.50	1.07
115.00	585.00	1.84	32.52	1.20	3.34	3.77	1.05	2.62	1.38	0.00	0.00	0.00	0.00	0.00	0.00	11.36	1.07
124.00	728.00	1.86	32.55	1.14	3.31	3.73	1.05	2.66	1.38	0.00	0.00	0.00	0.00	0.00	0.00	11.22	1.07
133.00	871.00	1.88	32.58	1.09	3.27	3.70	1.05	2.70	1.38	0.00	0.00	0.00	0.00	0.00	0.00	11.09	1.07
142.00	1014.00	1.90	32.61	1.04	3.24	3.67	1.05	2.74	1.38	0.00	0.00	0.00	0.00	0.00	0.00	10.97	1.07
151.00	1157.00	1.92	32.65	0.99	3.20	3.65	1.05	2.77	1.38	0.00	0.00	0.00	0.00	0.00	0.00	10.85	1.07
160.00	1300.00	1.95	32.68	0.96	3.17	3.64	1.05	2.81	1.38	0.00	0.00	0.00	0.00	0.00	0.00	10.75	1.07

		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.34	12.45	0.01	2.00	17.10	0.91	8.23	8.01	1.48
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.72	1.35	12.15	0.01	2.30	18.80	1.06	9.11	8.14	1.48
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84	1.36	11.88	0.01	2.66	20.83	1.25	10.19	8.33	1.48
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	1.95	1.36	11.62	0.01	3.02	22.69	1.44	11.18	8.54	1.48
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	2.06	1.37	11.38	0.01	3.39	24.36	1.63	12.06	8.75	1.48
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	2.16	1.37	11.15	0.01	3.76	25.84	1.83	12.84	8.97	1.48
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	2.26	1.37	10.93	0.01	4.14	27.10	2.03	13.51	9.20	1.48
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	2.36	1.37	10.73	0.01	4.52	28.17	2.24	14.08	9.43	1.48
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45	1.37	10.53	0.01	4.89	29.04	2.45	14.55	9.67	1.48
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	2.53	1.37	10.35	0.01	5.27	29.73	2.66	14.93	9.92	1.48

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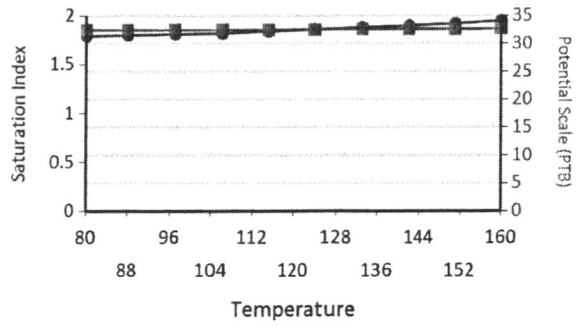
Water Analysis Report

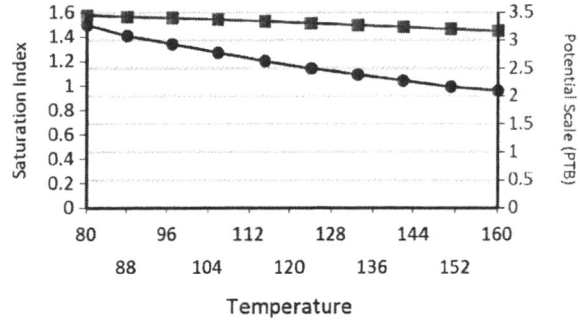
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

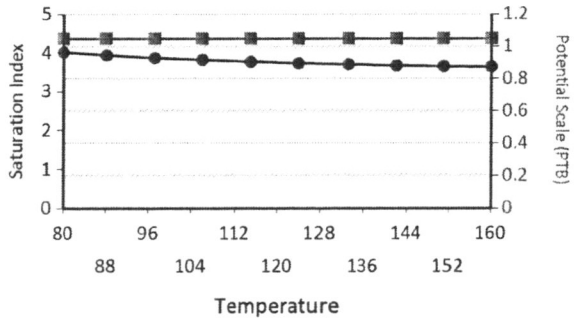
Calcium Carbonate



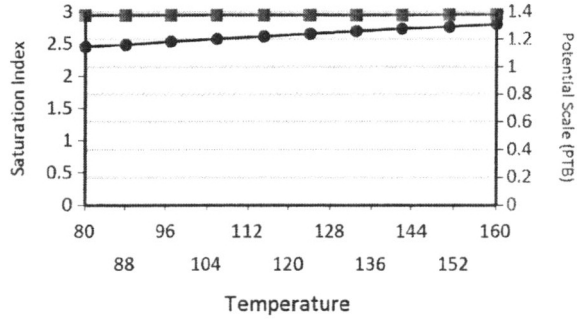
Barium Sulfate



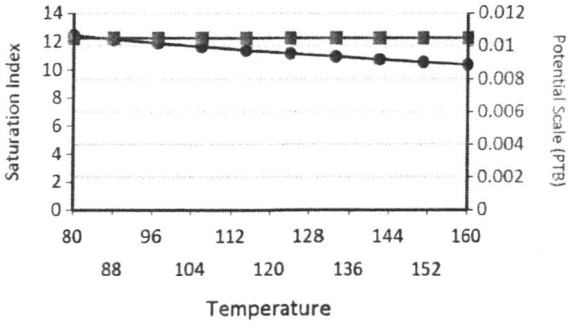
Iron Sulfide



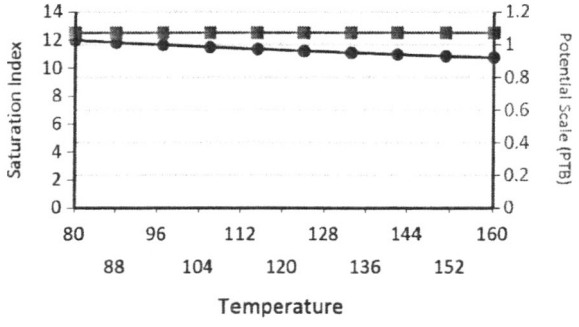
Iron Carbonate



Lead Sulfide



Zinc Sulfide



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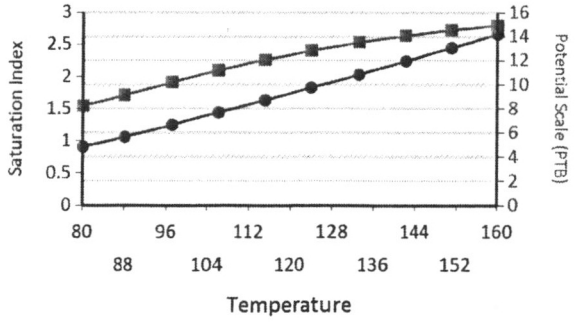
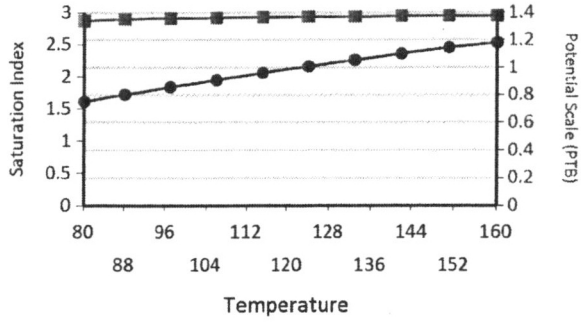
Water Analysis Report

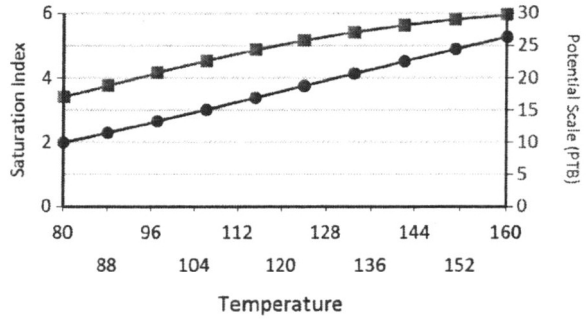
Ca Mg Silicate



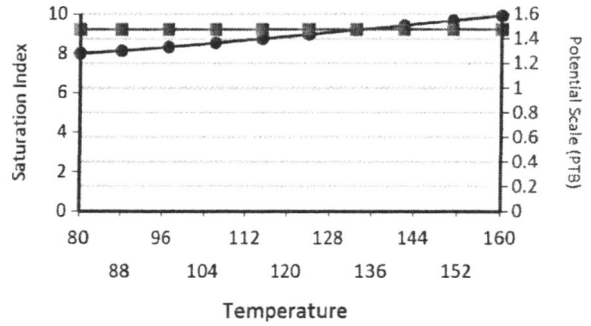
Zinc Carbonate



Mg Silicate



Fe Silicate



OMB No. 2040-0042 Approval Expires 12/31/2011

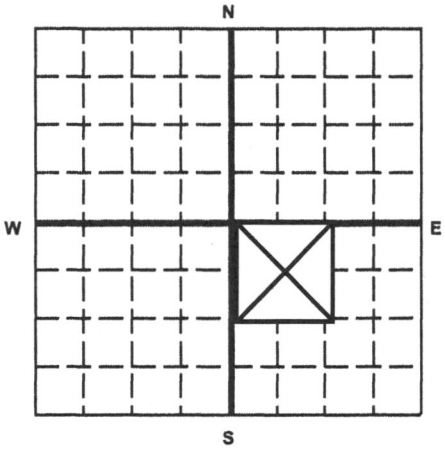
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04524

Surface Location Description
____ 1/4 of ____ 1/4 of NW 1/4 of SE 1/4 of Section 30 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 1980 ft. frm (N/S) S Line of quarter section
and 2199 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY
- ☐ Brine Disposal
- ☒ Enhanced Recovery
- ☐ Hydrocarbon Storage

TYPE OF PERMIT
- ☐ Individual
- ☒ Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 30-10

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1041	1067	818		0	0
February	13	1084	1105	938		0	0
March	13	1128	1163	1338		0	0
April	13	1121	1133	1251		0	0
May	13	1101	1125	1323		0	0
June	13	1091	1106	1262		0	0
July	13	1074	1115	1364		0	0
August	13	1143	1164	1662		0	0
September	13	1099	1153	1371		0	0
October	13	1151	1177	2109		0	0
November	13	1134	1151	1832		0	0
December	13	1132	1150	1961		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/11/2014

EPA Form 7520-11 (Rev. 12-08)

TAB	GREEN	BLUE	CBI
	2		

O2 Entered
Date 3/21/14
Initial JJ

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 30-10 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-263006**

Sales Rep: **James Patry**
Lab Tech: **Gary Winegar**

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.006
pH:	8.50
Calculated TDS (mg/L):	12578.25
CO2 in Gas (%):	
Dissolved CO2 (mg/L)):	0.00
H2S in Gas (%):	
H2S in Water (mg/L):	10.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	4484.31	Chloride (Cl):	6000.00
Potassium (K):	81.00	Sulfate (SO_4):	85.00
Magnesium (Mg):	17.00	Bicarbonate (HCO_3):	1830.00
Calcium (Ca):	43.00	Carbonate (CO_3):	
Strontium (Sr):	4.80	Acetic Acid (CH_3COO)	
Barium (Ba):	9.50	Propionic Acid (C_2H_5COO)	
Iron (Fe):	1.70	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.32	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.22	Silica (SiO_2):	21.40

Notes:
B=5 Al=0 Li=1.1

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	1.47	34.39	1.68	5.53	3.68	0.94	1.84	1.22	0.00	0.00	0.00	0.00	0.00	0.00	11.32	0.17
73.00	157.00	1.48	34.38	1.53	5.48	3.54	0.94	1.90	1.22	0.00	0.00	0.00	0.00	0.00	0.00	11.01	0.17
86.00	300.00	1.49	34.56	1.40	5.42	3.43	0.94	1.97	1.22	0.00	0.00	0.00	0.00	0.00	0.00	10.74	0.17
100.00	443.00	1.52	34.76	1.29	5.35	3.33	0.94	2.04	1.22	0.00	0.00	0.00	0.00	0.00	0.00	10.49	0.17
113.00	585.00	1.54	34.97	1.19	5.27	3.26	0.94	2.10	1.23	0.00	0.00	0.00	0.00	0.00	0.00	10.26	0.17
126.00	728.00	1.57	35.19	1.11	5.18	3.20	0.94	2.17	1.23	0.00	0.00	0.00	0.00	0.00	0.00	10.05	0.17
140.00	871.00	1.61	35.42	1.03	5.10	3.16	0.94	2.23	1.23	0.00	0.00	0.00	0.00	0.00	0.00	9.86	0.17
153.00	1014.00	1.65	35.65	0.97	5.01	3.13	0.94	2.29	1.23	0.00	0.00	0.00	0.00	0.00	0.00	9.69	0.17
166.00	1157.00	1.69	35.87	0.92	4.92	3.11	0.94	2.34	1.23	0.00	0.00	0.00	0.00	0.00	0.00	9.54	0.17
180.00	1300.00	1.74	36.08	0.87	4.85	3.10	0.94	2.40	1.23	0.00	0.00	0.00	0.00	0.00	0.00	9.39	0.17

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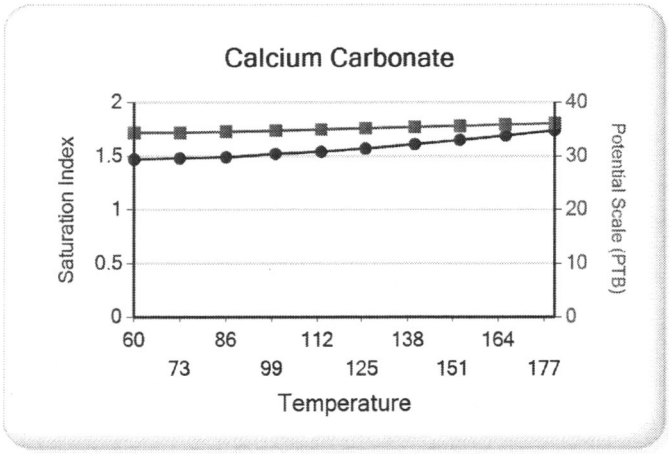
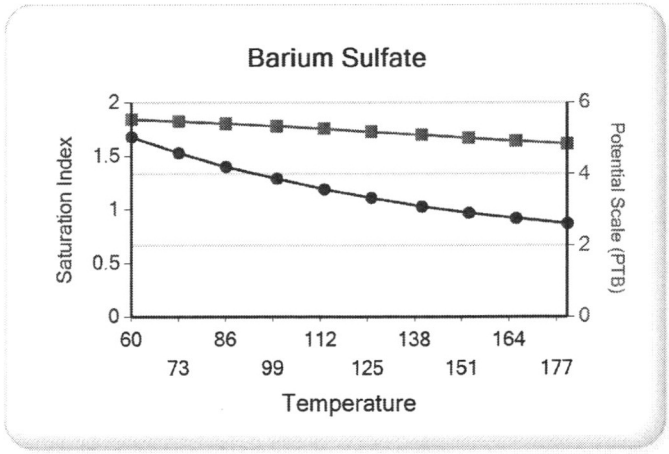
Water Analysis Report

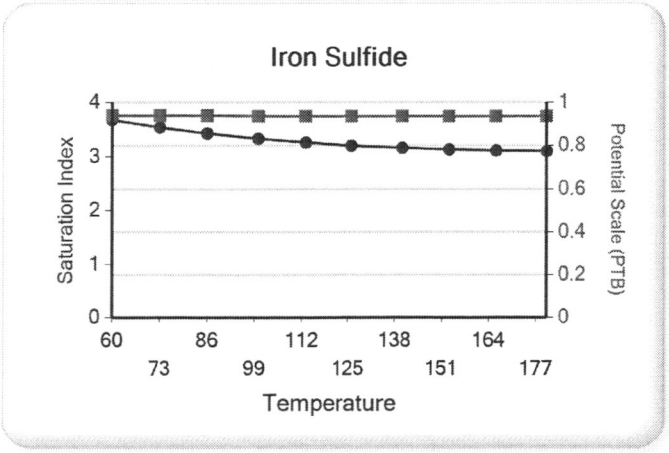
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.07	0.00	0.00	0.67	4.72	0.20	1.77	6.73	1.31
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.13	0.00	0.00	1.14	7.43	0.42	3.24	6.94	1.31
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.16	0.00	0.00	1.66	10.27	0.69	4.83	7.21	1.32
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.18	0.00	0.00	2.20	12.94	0.97	6.35	7.50	1.32
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.19	0.00	0.00	2.74	15.42	1.26	7.75	7.82	1.32
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.20	0.00	0.00	3.29	17.69	1.56	9.00	8.15	1.32
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.20	0.00	0.00	3.84	19.71	1.86	10.08	8.49	1.32
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36	0.21	0.00	0.00	4.40	21.46	2.17	10.97	8.85	1.32
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48	0.21	0.00	0.00	4.95	22.91	2.47	11.68	9.21	1.32
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.60	0.21	0.00	0.00	5.49	24.03	2.78	12.23	9.58	1.32

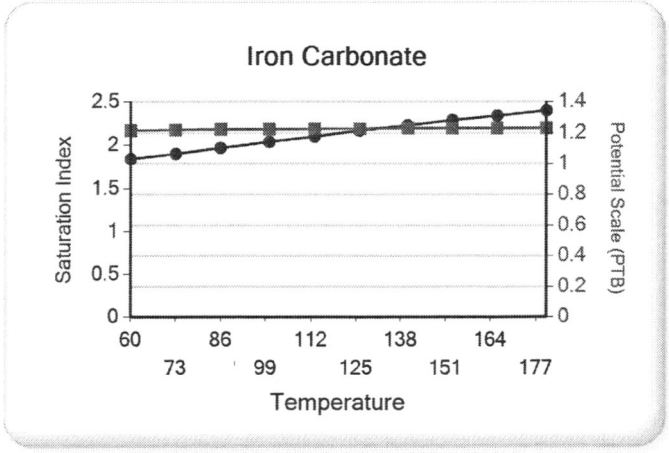
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate









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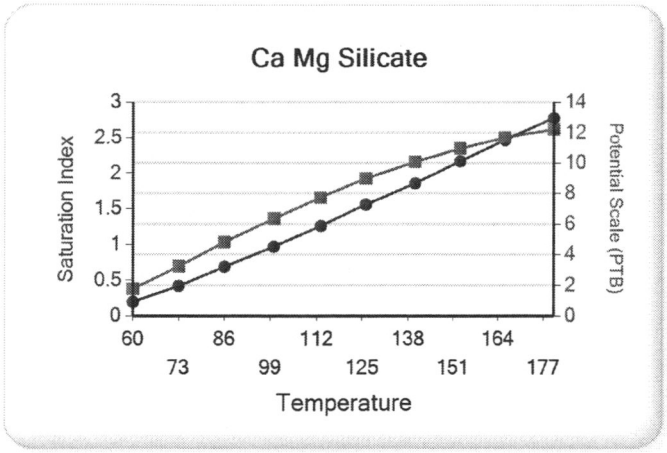
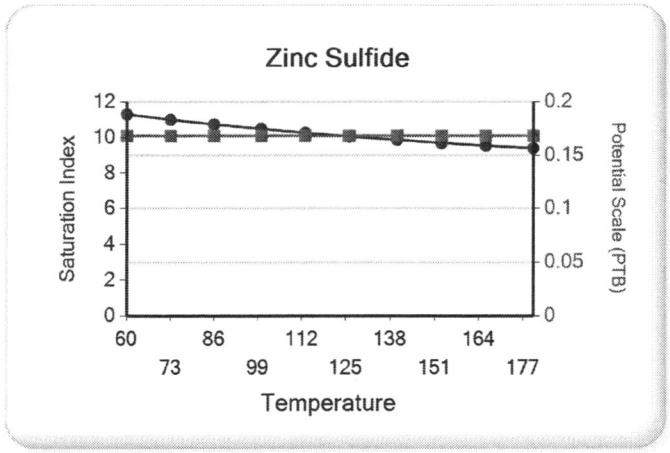
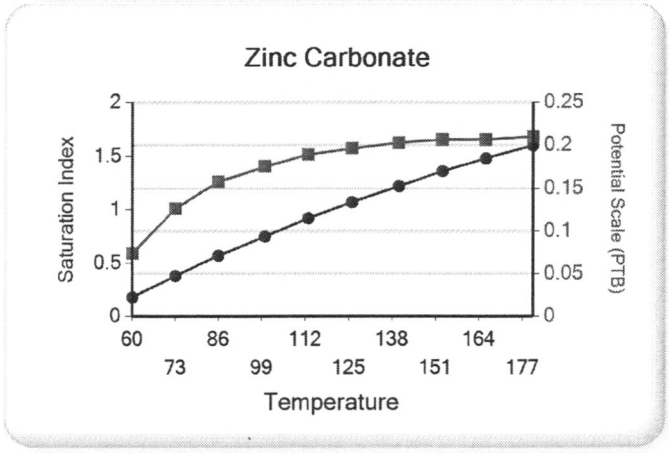
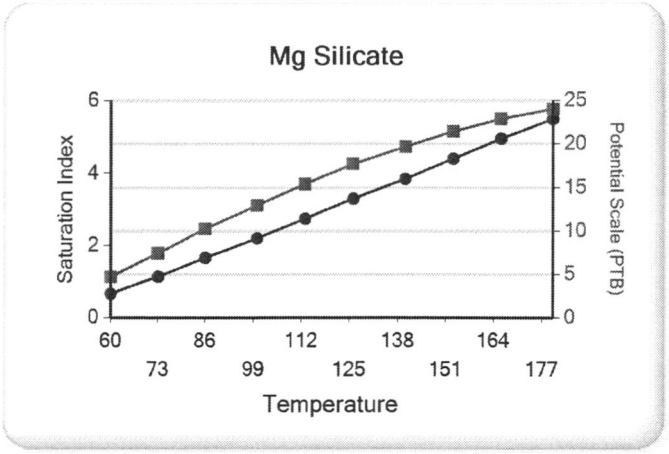
Water Analysis Report









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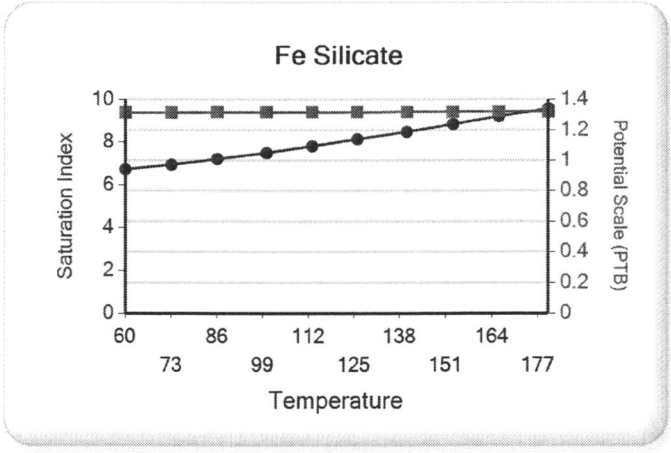
Water Analysis Report



UT2736-04524

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

OCT 30 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from a June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and discussed a plan to run RATS at set intervals of approximately 1000 pounds per square inch surface (psi) and 1500 psi until the maximum injection pressure of 1900 psig could be tested. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The EPA reviewed the RATS, determined that the test adequately demonstrated Part II MI, and authorized continued injection into the Ute Tribal #30-10, approving the maximum allowable injection pressure (MAIP) to the maximum pressure used during the RATS of 980 psi. Discussions between Petroglyph and EPA subsequent to this MAIP determination have pointed out the need to allow for injection at pressures greater than the present

UT2736-04524

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OCT 30 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

Letter totally confuses me?
What is the MAIP 1900 or 980?
Where is green card.

RE: **Authorizati**
Ute Tribal
EPA Area Pe
EPA Well Pe
Duchesne Co

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from a June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and discussed a plan to run RATS at set intervals of approximately 1000 pounds per square inch surface (psi) and 1500 psi until the maximum injection pressure of 1900 psig could be tested. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The EPA reviewed the RATS, determined that the test adequately demonstrated Part II MI, and authorized continued injection into the Ute Tribal #30-10, approving the maximum allowable injection pressure (MAIP) to the maximum pressure used during the RATS of 980 psi. Discussions between Petroglyph and EPA subsequent to this MAIP determination have pointed out the need to allow for injection at pressures greater than the present

MAIP of 980 psi. In response, EPA reviewed well construction and injection formation information, and has determined that the MAIP of 1900 psi in the original well authorization may be appropriate for this location.

The EPA hereby authorizes Petroglyph to run additional tests that demonstrate Part II Mechanical Integrity at test pressures up to the authorized maximum injection pressure of 1900 psi. Petroglyph may run tests at intermediate pressures should they choose. EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS) is enclosed.

The maximum pressure used during each approved Step Rate Test will become the new MAIP until such time that a new RATS is approved that demonstrates Part II Mechanical Integrity at a higher pressure, up to the presently authorized MAIP of 1900 psi. Therefore, until a new test that demonstrates Part II Mechanical Integrity at a pressure higher than 980 psi is approved, the authorized MAIP for the Ute Tribal #30-10 EPA Permit No. UT2736-04524 is 980 psi.

If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from a RATS, temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

enclosure: EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS)

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

MAY 15 2002

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Minor Permit Modification: Increase Maximum Authorized Injection Pressure (MAIP)**
Ute Tribal #30-10, Duchesne County, Utah
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from an April 11, 2002, radioactive tracer (RAT) survey used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph noted that the well has been shut in and will not resume injection until after the surface injection pressure drops below the current maximum allowable injection pressure (MAIP) of 980 psig. Petroglyph also requested permission to run a step rate test (SRT) at pressures above the 1310 psi used during this RAT survey in order to determine whether an increase of the MAIP may be warranted.

The EPA has reviewed the submitted RAT survey of April 11, 2002, and has determined that the test adequately demonstrated Part II MI at the recorded test pressure of 1310 psi. Therefore, the EPA is hereby approving an increase of the MAIP from 980 psig to 1310 psig.

An SRT to determine the formation fracture pressure of the injection zone may be run at a pressure greater than the newly-authorized MAIP of 1310 psig. The results of the SRT can provide information regarding the formation fracture pressure of the injection zone, and this information may be considered by the Director for determining whether further increase of the MAIP is warranted.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

MAY 15 2002

Ref: 8P-W-GW

Scan under
UT20736-04514
66 modification - minor
mod Approved 5/15/2002

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Minor Peri**
Authorized
Ute Tribal #
EPA Area Pe
EPA Well Permit No. UT04524

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from an April 11, 2002, radioactive tracer (RAT) survey used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph noted that the well has been shut in and will not resume injection until after the surface injection pressure drops below the current maximum allowable injection pressure (MAIP) of 980 psig. Petroglyph also requested permission to run a step rate test (SRT) at pressures above the 1310 psi used during this RAT survey in order to determine whether an increase of the MAIP may be warranted.

The EPA has reviewed the submitted RAT survey of April 11, 2002, and has determined that the test adequately demonstrated Part II MI at the recorded test pressure of 1310 psi. Therefore, the EPA is hereby approving an increase of the MAIP from 980 psig to 1310 psig.

An SRT to determine the formation fracture pressure of the injection zone may be run at a pressure greater than the newly-authorized MAIP of 1310 psig. The results of the SRT can provide information regarding the formation fracture pressure of the injection zone, and this information may be considered by the Director for determining whether further increase of the MAIP is warranted.

Additionally, should the results of a SRT indicate that a higher injection pressure is warranted, a new demonstration of Part II (External) Mechanical Integrity (MI) at a correspondingly higher pressure is required to demonstrate the absence of fluid movement out of the injection zone at that higher pressure.

Therefore, until such time as Petroglyph receives further written approval authorizing an increase of the MAIP, for routine injection activities, the MAIP shall remain set at 1310 psig.

If you have any questions in regard to the above action, please call 800.227.8917, for Chuck Tinsley at ext. 6266 or Dan Jackson at ext. 6155. Results from temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to: 5/15/02 DJ 4433C

Mr. Micheal Safford
Operation Coordinator
Petroglyph Operating Co., Inc.
P.O. Box 607
Roosevelt, UT 84066

(UT2736-04524)
UTE TRIBAL #30-10

MAY 15 2002

2. Article Number (Transfer from service label) 7001 0320 0005 9387 4230

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☒ Addressee

B. Received by (*Printed Name*)

C. Date of Delivery 5-20-02

D. Is delivery address different from item 1? ☐ Yes
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Sent To Mr. Micheal Safford
Operation Coordinator
Street, Apt. No. or PO Box No. Petroglyph Operating Co., Inc.
P.O. Box 607
City, State, ZIP+4 Roosevelt, UT 84066

7001 0320 0005 9387 4230

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
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http://www.epa.gov/region08

MAY 15 2002

Ref: 8P-W-GW

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Minor Permit Modification: Increase Maximum Authorized Injection Pressure (MAIP)**
Ute Tribal #30-10, Duchesne County, Utah
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from an April 11, 2002, radioactive tracer (RAT) survey used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph noted that the well has been shut in and will not resume injection until after the surface injection pressure drops below the current maximum allowable injection pressure (MAIP) of 980 psig. Petroglyph also requested permission to run a step rate test (SRT) at pressures above the 1310 psi used during this RAT survey in order to determine whether an increase of the MAIP may be warranted.

The EPA has reviewed the submitted RAT survey of April 11, 2002, and has determined that the test adequately demonstrated Part II MI at the recorded test pressure of 1310 psi. Therefore, the EPA is hereby approving an increase of the MAIP from 980 psig to 1310 psig.

An SRT to determine the formation fracture pressure of the injection zone may be run at a pressure greater than the newly-authorized MAIP of 1310 psig. The results of the SRT can provide information regarding the formation fracture pressure of the injection zone, and this information may be considered by the Director for determining whether further increase of the MAIP is warranted.

8P-W-GW DNJackson 5/8/02
8P-W-GW 5/8/02
8ENF-T NW 5-9-02
8P-W-GW 5/09/02
mailed 5/15/02
8P-W 5/13/02
8P-W 5/13/02

Additionally, should the results of a SRT indicate that a higher injection pressure is warranted, a new demonstration of Part II (External) Mechanical Integrity (MI) at a correspondingly higher pressure is required to demonstrate the absence of fluid movement out of the injection zone at that higher pressure.

Therefore, until such time as Petroglyph receives further written approval authorizing an increase of the MAIP, for routine injection activities, the MAIP shall remain set at 1310 psig.

If you have any questions in regard to the above action, please call 800.227.8917, for Chuck Tinsley at ext. 6266 or Dan Jackson at ext. 6155. Results from temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

/s/ Thorne W. Chambers

Kerrigan G. Clough
Assistant Regional Administrator
Office of Partnerships and
Regulatory Assistance

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T

UIC Program Routing Slip

Date: 5/8/02

Action: Response Letter

To:		Mailcode	Initials	Date
Originator	Dan Jackson	8P-W-GW	DJ	5/8/02
C. Tinsley	concurrence	8P-W-GW	CT	5/9/02
N. Wiser	concurrence	8ENF-T	NW	5-9-02
L. Clutts	proof read	8P-W-GW	LC	5/09/02
D. Hogle	concurrence	8P-W-GW	DGH	5/13/02
Lynn Johnson		8P-W	LJ	5/13/02
S. Tuber	concurrence	8P-W	[illegible]	5/13/02
K. Clough	**SIGNATURE** for	OPRA	KC	5.14.02
Please return to ~~Originator~~ L. Clutts for mailin			LC	5/15/02

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- Concurrence copy
- Reading File copy
- Mailing List (as necessary)
- Additional Documents (as necessary)

RIGHT SIDE

- Response Letter
-
-

COMMENTS _____

Originator: Dan Jackson ext 6155

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
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OCT 30 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from a June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and discussed a plan to run RATS at set intervals of approximately 1000 pounds per square inch surface (psi) and 1500 psi until the maximum injection pressure of 1900 psig could be tested. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The EPA reviewed the RATS, determined that the test adequately demonstrated Part II MI, and authorized continued injection into the Ute Tribal #30-10, approving the maximum allowable injection pressure (MAIP) to the maximum pressure used during the RATS of 980 psi. Discussions between Petroglyph and EPA subsequent to this MAIP determination have pointed out the need to allow for injection at pressures greater than the present

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Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from a June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and discussed a plan to run RATS at set intervals of approximately 1000 pounds per square inch surface (psi) and 1500 psi until the maximum injection pressure of 1900 psig could be tested. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The EPA reviewed the RATS, determined that the test adequately demonstrated Part II MI, and authorized continued injection into the Ute Tribal #30-10, approving the maximum allowable injection pressure (MAIP) to the maximum pressure used during the RATS of 980 psi. Discussions between Petroglyph and EPA subsequent to this MAIP determination have pointed out the need to allow for injection at pressures greater than the present

MAIP of 980 psi. In response, EPA reviewed well construction and injection formation information, and has determined that the MAIP of 1900 psi in the original well authorization may be appropriate for this location.

The EPA hereby authorizes Petroglyph to run additional tests that demonstrate Part II Mechanical Integrity at test pressures up to the authorized maximum injection pressure of 1900 psi. Petroglyph may run tests at intermediate pressures should they choose. EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS) is enclosed.

The maximum pressure used during each approved Step Rate Test will become the new MAIP until such time that a new RATS is approved that demonstrates Part II Mechanical Integrity at a higher pressure, up to the presently authorized MAIP of 1900 psi. Therefore, until a new test that demonstrates Part II Mechanical Integrity at a pressure higher than 980 psi is approved, the authorized MAIP for the Ute Tribal #30-10 EPA Permit No. UT2736-04524 is 980 psi.

If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from a RATS, temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

/s/ Edwin Hogle
Director
Ground Water Program

enclosure: EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS)

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

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1. Article Addressed to: 10/30/01 DJ 4220C
Mr. Micheal Safford
Operation Coordinator
Petroglyph Operating Co., Inc.
P.O. Box 607
Roosevelt, UT 84066

(UT2736-04524)
UTE TRIBAL #3-10

2. Article Number *(Copy from service label)* 7001 0320 0005 9387 2311

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Sent To Mr. Micheal Safford
Operation Coordinator
Petroglyph Operating Co., Inc.
Street, Apt. No.; or PO Box No. P.O. Box 607
City, State, ZIP+4 Roosevelt, UT 84066

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
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DENVER, CO 80202-2466
http://www.epa.gov/region08

OCT 30 2001

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from a June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and discussed a plan to run RATS at set intervals of approximately 1000 pounds per square inch surface (psi) and 1500 psi until the maximum injection pressure of 1900 psig could be tested. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The EPA reviewed the RATS, determined that the test adequately demonstrated Part II MI, and authorized continued injection into the Ute Tribal #30-10, approving the maximum allowable injection pressure (MAIP) to the maximum pressure used during the RATS of 980 psi. Discussions between Petroglyph and EPA subsequent to this MAIP determination have pointed out the need to allow for injection at pressures greater than the present

8P-W-GW D. Jackson 10/25/01 8P UGW Chuck Tinsley 10/26/01 8P-W-GW 10/30/01 L. Calutta mailed 10/30/01 L. Calutta 10/30/01

MAIP of 980 psi. In response, EPA reviewed well construction and injection formation information, and has determined that the MAIP of 1900 psi in the original well authorization may be appropriate for this location.

The EPA hereby authorizes Petroglyph to run additional tests that demonstrate Part II Mechanical Integrity at test pressures up to the authorized maximum injection pressure of 1900 psi. Petroglyph may run tests at intermediate pressures should they choose. EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS) is enclosed.

The maximum pressure used during each approved Step Rate Test will become the new MAIP until such time that a new RATS is approved that demonstrates Part II Mechanical Integrity at a higher pressure, up to the presently authorized MAIP of 1900 psi. Therefore, until a new test that demonstrates Part II Mechanical Integrity at a pressure higher than 980 psi is approved, the authorized MAIP for the Ute Tribal #30-10 EPA Permit No. UT2736-04524 is 980 psi.

If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from a RATS, temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

enclosure: EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS)

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

OCT 30 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

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If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from a RATS, temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

enclosure: EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS)

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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http://www.epa.gov/region08

OCT 30 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Petroglyph Operating Company, Inc. (Petroglyph) submitted to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from a June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the results, Petroglyph requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and discussed a plan to run RATS at set intervals of approximately 1000 pounds per square inch surface (psi) and 1500 psi until the maximum injection pressure of 1900 psig could be tested. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The EPA reviewed the RATS, determined that the test adequately demonstrated Part II MI, and authorized continued injection into the Ute Tribal #30-10, approving the maximum allowable injection pressure (MAIP) to the maximum pressure used during the RATS of 980 psi. Discussions between Petroglyph and EPA subsequent to this MAIP determination have pointed out the need to allow for injection at pressures greater than the present

MAIP of 980 psi. In response, EPA reviewed well construction and injection formation information, and has determined that the MAIP of 1900 psi in the original well authorization may be appropriate for this location.

The EPA hereby authorizes Petroglyph to run additional tests that demonstrate Part II Mechanical Integrity at test pressures up to the authorized maximum injection pressure of 1900 psi. Petroglyph may run tests at intermediate pressures should they choose. EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS) is enclosed.

The maximum pressure used during each approved Step Rate Test will become the new MAIP until such time that a new RATS is approved that demonstrates Part II Mechanical Integrity at a higher pressure, up to the presently authorized MAIP of 1900 psi. Therefore, until a new test that demonstrates Part II Mechanical Integrity at a pressure higher than 980 psi is approved, the authorized MAIP for the Ute Tribal #30-10 EPA Permit No. UT2736-04524 is 980 psi.

If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from a RATS, temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

enclosure: EPA Region VIII Guideline for the acquisition of a radioactive tracer survey (RATS)

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

AUG 27 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from the June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the RATS results, you requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and indicated your willingness to run RATS at set intervals until a maximum injection pressure of 1900 psig could be obtained, tested and approved. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The results of the RATS have been reviewed and the EPA has determined that the test adequately demonstrated Part II MI, that injected fluids will remain in the authorized injection interval, at the tested pressure of 980 psig. Therefore, EPA hereby approves this demonstration of Part II (External) MI and authorizes continued injection into the Ute Tribal #30-10 under the terms and conditions of EPA Area Permit UT2736-00000 and the

Authorization for Additional Well UT2736-04524 issued under this Area Permit. The maximum allowable injection pressure **(MAIP) for this well is 980 psig**.

Please note that the maximum pressure used during a RATS MI demonstration becomes the maximum allowable injection pressure for the well. However, you may apply for a higher maximum allowable injection pressure at a later date after the formation pressure has further stabilized. Your application should be accompanied by the interpreted results from a step rate test that measure the formation fracture pressure and fracture gradient at this location. A copy of EPA guidelines for running and interpreting a step rate test are included with this letter. Should the step rate test result in approval of a higher MAIP, a new Part II (External) MI demonstration must be run. Please note that to use a pressure greater than the present MAIP of 980 psig during a step rate test and RATS, you must first receive prior written authorization from the Director.

If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

enclosure: Step-Rate Test Procedure

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

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1. Article Addressed to: 8/27/01 CW 4152C & 4153C
Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Co., Inc.
P.O. Box 607
Roosevelt, UT 84066

AUG 27 2001

(UT 2736-04524)
UTE TRIBAL #30-10

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X [signature] ☐ Agent ☐ Addressee

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Sent To Mr. Micheal Safford
Street, Apt. No., or PO Box No. Operations Coordinator
City, State, ZIP+4 Petroglyph Operating Co., Inc.
P.O. BOX 607
Roosevelt, UT 84066

PS Form 3800, January 2001 See Reverse for Instructions

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Sent To Mr. Micheal Safford
Street, Apt. No., or PO Box No. Operations Coordinator
City, State, ZIP+4 Petroglyph Operating Co., Inc.
P.O. BOX 607
Roosevelt, UT 84066

PS Form 3800, January 2001 See Reverse for Instructions

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8/27/01 To Micheal Safford
Petroglyph Operating Company, Inc.

Original green card — (# 4152C)
1. UTE TRIBAL #30-10 (UT2736-04524)

2. UTE TRIBAL #04-11 (UT2736-04635)
(# 4153C)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

AUG 27 2001

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Micheal Safford
Operations Coordinator
Petroglyph Operating Company, Inc.
P.O. Box 607
Roosevelt, UT 84066

RE: **Authorization to Continue Injection**
Ute Tribal #30-10
EPA Area Permit No. UT2736-00000
EPA Well Permit No. UT04524
Duchesne County, Utah

Dear Mr. Safford:

Thank you for submitting to the Region VIII Ground Water Program office of the Environmental Protection Agency (EPA) the results from the June 22, 2001, radioactive tracer survey (RATS) used to demonstrate Part II (External) Mechanical Integrity (MI) test on the Ute Tribal #30-10 injection well. In the letter accompanying the RATS results, you requested an extension on the time allowed to inject in order to allow for continued stabilization of pressure, and indicated your willingness to run RATS at set intervals until a maximum injection pressure of 1900 psig could be obtained, tested and approved. A limited injection period of up to one hundred and eighty days, beginning March 2, 2001, was authorized to allow for stabilization of the injection formation pressure prior to the demonstration of Part II (External) MI.

The results of the RATS have been reviewed and the EPA has determined that the test adequately demonstrated Part II MI, that injected fluids will remain in the authorized injection interval, at the tested pressure of 980 psig. Therefore, EPA hereby approves this demonstration of Part II (External) MI and authorizes continued injection into the Ute Tribal #30-10 under the terms and conditions of EPA Area Permit UT2736-00000 and the

10/30-01 effective date for 980#

Authorization for Additional Well UT2736-04524 issued under this Area Permit. The maximum allowable injection pressure **(MAIP) for this well is 980 psig**.

Please note that the maximum pressure used during a RATS MI demonstration becomes the maximum allowable injection pressure for the well. However, you may apply for a higher maximum allowable injection pressure at a later date after the formation pressure has further stabilized. Your application should be accompanied by the interpreted results from a step rate test that measure the formation fracture pressure and fracture gradient at this location. A copy of EPA guidelines for running and interpreting a step rate test are included with this letter. Should the step rate test result in approval of a higher MAIP, a new Part II (External) MI demonstration must be run. Please note that to use a pressure greater than the present MAIP of 980 psig during a step rate test and RATS, you must first receive prior written authorization from the Director.

If you have any questions in regard to the above action, please contact Chuck Tinsley at 303.312.6266 or Dan Jackson at 303.312.6155. Results from temperature log or other Part II MI test should be mailed directly to the Ground Water Program Director, Mail Code 8P-W-GW.

Sincerely,

D. Edwin Hogle
Director
Ground Water Program

enclosure: Step-Rate Test Procedure

cc: Mr. D. Floyd Wopsock, Chairman
Uintah & Ouray Business Council
Ute Indian Tribe

Ms. Elaine Willie
Environmental Coordinator
Ute Indian Tribe

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

Mr. Jerry Kenczka
Bureau of Land management
Vernal District Office

Mr. Nathan Wiser, 8ENF-T
USEPA

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CONCURRENCE COPY

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8P-W-GW 8/23/01 RG

8/27/01

mailed 8/27/01 RG

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